Water Works and Sewerage

Design-Construction-Collection-Treatment-Distribution-Disposal

INDEX

Vol. LXXX, January-December, 1933

GENERAL INDEX

A

Activated Carbon, Evaluation of..... 220
Activated Carbon in Industrial Water Purification 55
Activated Carbon, Powdered, Evaluation of for Water Works Use..... 86
"Activated" Ice, Skating on, Grand Island, Neb. 96
Activated Sludge, Blanket Depth Detector 34
Activated Sludge, New Method of Concentrating 179
Activated Sludge Patents, Infringement Case 94
Activated Sludge Treatment, Reducing Cost of 364
Activated Sludge, Wasting Excess..... 411
Administration, Proper, of Water Works 299
Advertising for Degree of Effluent..... 302
American Water Works Association, 53rd Convention 289
A. W. W. A. Conventions, Group Pictures of Old 209
American Water Works Association, Meeting North Carolina Section..... 443
American Water Works Association, Meeting Illinois Section..... 174
American Water Works Association, Meeting New York Section..... 342
American Water Works Association, Convention Program 183
American Water Works Association, Water Purification Papers at 53rd Convention 259
Ammonia-Chlorine Process, Richmond, Va. 157
Ammonia in Water Treatment..... 379
Anthracite, Attrition Loss in Rapid Filters 246
Anthracite Coal Experience as Filter Medium in Water Softening..... 394
Anthracite Coal in Filtration..... 409
Anthracite as Filtering Medium..... 135
Anthracite Coal, Loss of Head in Filters 66
Anthracite, Superiority to Sand as Filter Medium 330
A. S. C. E. Meeting Sanitary Engineering Division 60
Athens, Greece, Water Purification Plant 113

B

Beet Sugar Factory Effluent, Purification 196
Bitumastic Enamel Lining, Pipe..... 75
Blanket Depth Detector for Activated Sludge 321
Bleaching Clay in Water Purification.... 53
Bleaching Clays in Taste and Odor Removal 287
By-Products, Industrial Recovery..... 296
By-Products, Sewage Disposal, Utilization 241

C

California Sewage Works Association, 6th Convention 415
Carbon, Activated, Powdered Evaluation 86
Cast Iron Pipe for Sewer Connections.... 171
Cast Iron Pipe, Trunk Sewers..... 192
Cement Lined Water Mains..... 339
Cement Linings for Pipe..... 75
Central States Sewage Works Association, Joint Meeting with A. P. H. A..... 387
Chemical-Mechanical Treatment 70
Chemical Treatment of Sewage, Evaluating 418
Chemical Treatment of Sewage, Recent Advances 388, 393
Chemical Treatment of Sewage..... 166
Chemical Treatment of Sewage, Birmingham, Ala. 427
Chemical Precipitation in Sewage Treatment 367
Chemical Precipitation Studies, Atlanta, Ga. 367
Chemical Purification of Sewage..... 89
Chicago's Old Water Tower, Photographs 217
Chloramines, Experiences with at Richmond, Va. 157
Chlorine Absorption by Sewage Sludge.. 69
Chlorine, Ammonia, Process, Richmond, Va. 157
Chlorine Determinations, Residual Accuracy Essential 5
Chlorine Handling, Modernization in..... 322
Chlorine, Regulation in Sewage Odor Control 218
Chlorination, Continuous, Important..... 59
Chlorination Controls, Foaming Imhoff Tanks 137
Chlorination, Sewage, Developments in.. 133
Chlorination, Sewage, Diagram for Determining Cost 245
Chlorination, Dundee, N. Y., Sewage Treatment Plant 376
Chlorination, Modern Practie..... 361
Chlorination, Sewage, Downers Grove, Ill. 200
Chlorination, Sewage 19
Chlorine Requirements and Temperature Changes 447
City Planning, Water Supply in Relation to 189
Clarification by Filtration Through Anthracite 135
Clay, for Eliminating Short Filter Runs. 304
Clays, Bleaching, Tests in Odor Removal 287
Clear Water Observation Station, Winnetka, Ill. 270
Coagulation Control 406
Coagulant, New, Ferrisul..... 310
Coal, Anthracite, Experience as Filter Medium 394
Coal, Anthracite, in Water Filters..... 135
Codes and Initials..... 362
Color, Removal by Permanganate..... 225
Constant Head Flow Meter..... 282
Consumers' Good Will—Its Value and Metheds of Promotion..... 280
Convention Exhibits, Improving..... 146
Copper Sulphate Kills Roots in Sewers.. 102
Copper, Use in Water Works Practice... 110
Corrosion, Influence of Dissolved Oxygen on 353
Court Decision, Los Angeles Gas Corp.. 271
Cyclonic Whirls in Ocean..... 344

D

Dearborn, Mich., Sewage Treatment Plant 18
Disc Meters, Importance of Testing at Correct Rates of Flow..... 6
Dissolved Oxygen, Influence on Corrosion Losses 353
Dorrco Aerators, Operating Results..... 366
Dry Feeder, Omega..... 234
Dundee, N. Y., Sewage Treatment Plant. 375

E

Editorials .....36, 70, 110, 146, 186, 227 .....271, 308, 345, 378, 418, 454
Effluent, Advertising for Degree of..... 302
Elevated Storage, Economy of, Glencoe, Ill. 63
Elevated Storage Reservoir, 4,000,000 Gal., Sheboygan, Wis..... 311
Engineering Foundation, George W. Fuller, Chairman 98
Ensley Sewage Treatment Plant, Cost of 275

F

Federal Emergency Administration of Public Works, Digest of Circulars... 337
Ferric Chloride Coagulation of Sewage. 335
Ferric Chloride for Sewage Clarification. 89
Ferric Chloride Treatment of Sewage, Grand Rapids, Mich..... 207
Fertilizer, Sewage Sludge, Grand Rapids, Mich. 243
Filter Beds, Obstacle to Flow of Water Through 332
Filter, Medium, Anthracite Coal..... 394
Filter Mediums, Comparison of Anthracite and Sand..... 330
Filter Sand, Washing..... 180
Filter, Vacuum, Wright..... 147
Filter Washing 204
Filters, Rapid, Attrition Loss of Anthracite 246
Filters, Use of Anthracite Coal in..... 66
Filters, Reconditioning 453
Filtration, Anthracite Coal in..... 409
Filtration Plant, Athens, Greec..... 113
Filtration Plant, Lehigh Water Co., Easton, Pa. 349
Filtration Plant, Operators, Registration in West Virginia..... 353
Filtration Plant, Winnetka, Ill., Clay Used to Eliminate Short Filter Runs. 304
Filtration, Vacuum, of Sewage, Rockville Centre, N. Y..... 283
Filtration, Water, Future of..... 27
Flocculators, Mechanical 43
Flow Meter, Constant Head..... 282
Foaming, Imhoff Tanks, Controlled by Chlorination 137
Freeman, John R., Death of..... 397

G

Gas, Sewage, Analysis..... 99
Gas, Sewage Sludge, Utilization for Refrigeration 426
Gas, Sludge, Grand Rapids, Mich..... 244
Gas, Sludge, Power Production from..... 151
Grand Rapids, Mich., Utilization of Sewage By-Product 241
Griffith Park Sewage Experimental Station, New Method of Concentrating Activated Sludge 179

H

Heated Sludge Digestion Tanks, Baltimore Experiment 81
Horner, H. H., Death of..... 266
Houston, Sir Alexander, Retirement of.. 419
Hydrant Maintenance 197
Hydrant Pressure Survey, Portland, Me.. 181
Hydrant, Fire, Kennedy Extension..... 71
Hydrogen Sulphide, Generation in Sanitary Sewers 141

I

Imhoff Tanks Foaming, Controlled by Chlorination 137
Incinerator, New, Baltimore, Md..... 156
Incineration Plant, Grit and Screenings, Milwaukee 317
Industrial Water Purification, Activated Carbon in 55
Industrial Water Supply, Tanneries..... 163
Iron Coagulants in Water Purification... 359

L

Laboratory, Water Purification Plant.... 407
Lancaster, Pa., Sewage Collection and Treatment 371
Laughlin Process of Sewage Treatment.. 117
Lehigh Water Co., Filtration Plant, Erie, Pa. 349
Leible, Edward C., Service with Indianapolis Water Co..... 397
Licensing Operators 146
Linings, Pipe, Economic Significance.... 73

M

Mains, New, Sterilizing..... 321
Management of Water Works, Group vs. Municipal 362
Maryland-Delaware Water and Sewage Association, 7th Conference..... 203
McClintock, James R., Death of..... 162
Mechanical Agitation in Activated Sludge Treatment 364
Mechanical Agitation by Motor Driven Paddles, Winnetka, Ill..... 103
Mechanical Flocculators 43
Meter, Constant Head Flow..... 282
Metering Practices 251
Meters, Reading and Billing, Baltimore, Md. 267
Meters, Disc, Testing..... 6
Meters, Water, Maintenance, Baltimore, Md. 267
Michigan Sewage Works Association, 9th Annual Meeting..... 168
Mixing Basins, Mechanical Agitation.... 103

N

National Recovery Committee, Statement of 295
New England Sewage Works Association, 5th Annual Meeting..... 373
New England Water Works Association, 52nd Annual Convention..... 355
New England Water Works Association, Meeting 169
New Equipment and Materials.....71, 111 .....147, 228, 273, 309, 381, 420
New Jersey Sewage Works Association, 19th Meeting 129
New York State Sewage Works Association, 5th Meeting..... 47
New York State Sewage Works Association, Spring Meeting 262
North Carolina Sewage Works Association, Annual Meeting 18
North Carolina Sewage Works Association, Meeting 443
N. R. A. Loans for Water Works and Sewerage 409

O

Observation Station, Clear Water Reservoir, Winnetka, Ill..... 270
Obsolescence, Overcoming in Pumping Plant 100
Odor Control by Chlorination, Downers Grove, Ill. 200
Odor Control, Sewage, Regulation of Chlorination for 218
Odor Nuisance, Eliminated by Chemical Treatment 367
Odor Removal with Activated Carbon.... 86
Ohio Conference on Sewage Treatment, 6th 24
Ohio Conference on Sewage Treatment, 7th 435
Ohio Conference on Water Purification, 13th Annual Meeting..... 398
Oil Refineries, Water Supplies for..... 211
Operators, Licensing 146
Organic Iron, Removal by Permanganate 225
Oxygen, Dissolved, Influence on Corrosion Losses 353

P

Paints, for Water Works..... 16
Paper Mills, Recovery of Wastes..... 296
Pennsylvania Sewage Works Association, 7th Annual Conference..... 369
Pennsylvania Water Works Operators Association, 6th Conference..... 405
Permanganate for Organic Iron and Color Removal 225
Pipe, Cast Iron, for Sewer Connections.. 171
Pipe, Cast Iron, Trunk, Sewers, Washington Suburban Sanitary District... 192
Pipe Coatings 289

Pipe Coatings, Portland Cement..... 380
Pipe Lines, Methods of Locating..... 323
Pipe Linings, Discussion, N. E. W. W. Association 359
Pipe Linings, Economic Significance..... 73
Portland Cement Pipe Coatings..... 380
Portland Cement, Why Bidding Prices Are Uniform 101
Power Production from Sludge Gas Springfield, Ill. 151
Princeton, N. J., Sewage Treatment Plant 77
Public Works Program.....354, 379
Public Relations, Securing Consumers Good Will 280
Public Relations, Water Works..... 121
Pulp and Paper Industry, Reclamation of Wastes 296
Pumping, Double 32
Pumping Plant, Overcoming Obsolescence 100

R

Railway Water Treatment.....9, 92
Rainfall and Crop Yields..... 346
Rapid Filter, Attrition Loss of Anthracite in 246
Regional Planning, Water Supply in Relation to 189
Reservoir, Clear Water, Observation Station 270
Reservoir, Elevated Storage, Sheboygan, Wis. 311
Roadside Drinking Water 451
Rockville Centre, N. Y., Vacuum Filtration of Sewage 283
Roots in Sewers, Killed by Copper Sulphate 102

S

Salinas, Calif., Experiences in Wasting Excess Sludge 411
San Antonio Sewage Treatment Plant... 123
Sand Filter 200
Sanitary Districts, Sewage Treatment Costs, Illinois 254
Sanitary Sewers, Generation of Hydrogen Sulphide in 141
Screenings, Incineration Plant, Milwaukee 317
Septicity, Effect on Sewage Treatment.. 132
Settling Tank Efficiencies, Improving, Aurora, Ill. 440
Sewage Clarification with Ferric Chloride, Palo Alto, Calif..... 89
Sewage, Chemical Treatment of..... 166
Sewage Chlorination, Diagram for Determining Cost 245
Sewage Chlorination, Downers Grove, Ill. 200
Sewage Chlorination 19
Sewage Chlorination, Developments in... 133
Sewage Coagulation with Ferric Chloride 335
Sewage Disposal Plant, Spartanburg, S. C. 327
Sewage Disposal, Utilization of By-Products 241
Sewage Gas, Simple Method of Analysis. 99
Sewage Meters, New Bailey..... 71
Sewage Odor Control, Regulation of Chlorine Application 218
Sewage Screenings, Incineration Plant for 317
Sewage Sludge, Chlorine Absorption by.. 69
Sewage Sludge Gas, Utilization for Refrigeration 426
Sewage Sludge, Cost of Drying..... 403
Sewage Treatment, Chemical Precipitation in 367
Sewage Treatment, Cost, Schenectady, N. Y. 261
Sewage Treatment, Dearborn, Mich..... 18
Sewage Treatment, Costs, Illinois..... 254
Sewage Treatment, Laughlin Process.... 117
Sewage Treatment Plant, Ensley, Birmingham, Ala. 275
Sewage Treatment Plant, Downers Grove, Ill. 200
Sewage Treatment with Ferric Chloride.. 207
Sewage Treatment Plants, Birmingham, Ala. 427
Sewage Treatment Plant, Dundee, N. Y.. 375
Sewage Treatment Plant, Experimental, Palo Alto, Calif..... 89
Sewage Treatment Plant, Grand Rapids, Mich. 241
Sewage Treatment Plant, Princeton, N. J. 131
Sewage Treatment Plant, Rockville Centre, N. Y..... 283
Sewage Treatment Plant, Newark, N. J.. 159
Sewage Treatment Plant, Souderton, Penn. 265
Sewage Treatment Plants, Connecticut Requirements for Operators..... 338
Sewage Treatment Plants, Costs at Five in Illinois 255
Sewage Treatment Plant, San Antonio, Texas 21, 123
Sewage Treatment Plants, Small, Operation of 263
Sewage Treatment, Recent Progress..... 37
Sewage Treatment Self Supporting..... 272
Sewage, Vacuum Filtration of..... 283
Sewage Treatment Works, Aurora, Ill... 440
Sewerage Treatment Plants, Springfield, Ill. 151
Sewer Connections, Cast Iron Pipe for... 171
Sewer Rental 370
Sewer Rental Plan, Ohio..... 91
Sewer System, Violations of Good Practice in Construction..... 306
Sewers, Cast Iron Pipe, Washington Suburban Sanitary District..... 192
Sewers, Roots Killed by Copper Sulphate 102
Sludge, Activated, Blanket Depth Detector 34
Sludge, Activated, Reducing Cost of Treatment 364
Sludge Blanket Detector.....68, 144
Sludge, Cost of Drying on Sand Beds.... 403
Sludge Dewatering Mechanical..... 372
Sludge Digestion, Experiments, Baltimore 81
Sludge Digestion, Seeding Material in.... 389
Sludge Drying Beds, Costs, San Antonio, Tex. 123
Sludge Fertilizer, Grand Rapids, Mich.. 243
Sludge Gas, Power Production from..... 151
Sludge Removal for Water Treatment Plants 95
Sludge, Sewage, Chlorine Absorption by. 69
Solar Constant, Cause of Variation..... 109
Souderton, Penn., Sewage Treatment Plant 265
Southern Pacific Ry., Water Treatment.. 92
Sprinkling Filters, Chemical Treatment as Adjunct 166
Sprinkling Filters, Operating Data..... 133
Spartanburg, S. C., New Water Supply.. 177
Sprinkling Filters, Sturdy..... 186
State Sanitary Engineers, Accomplishments of 345
Stockton, Calif., Experiences in Control of Framing Imhoff Tanks..... 137
Storage Yard Equipment, Water Works, Handling 383

T

Tank, Elevated, Glencoe, Ill..... 63
Tank, Water, 6,000,000 Gal., Milwaukee, Wis. 237
Tanneries, Water Supply for.....138, 163
Taste and Odor Removed, Bleaching Clays in 287
Taste, Control 447
Technocracy, Where Does It Get Us?.... 36
Texas Water Works Short School, 15th.. 97
Trade Wastes, Treatment..... 390
Turbidimeter, Immersion 144
Turbidimeters, Baylis, Jackson, St. Louis, Patterson 127
Turbidity, Artificial Clay Used for..... 304
Turbidity Determinations, Methods..... 125

U

Utility Values, Supreme Court Decision.. 271

V

Vacuum Filtration of Sewage, Rockville Centre, N. Y..... 283
Virginia Water and Sewage Works Association, Annual Meeting..... 15
Virginia Water and Sewage Works Association, Meeting 431

W

Wastes, Industrial, Recovery for Profit.. 296
Wastes and Pollution vs. Recovery for Profit 296
Water Bills, Delinquent..... 251
Water Clocks 199
Water Department Equipment, Handling 383
Water Department, Supplies, Handling, Erie, Pa. 383
Water Filtration, Future of..... 27
Water Filtration, Iron Coagulants in..... 359
Water Filtration Plant, Athens, Greece.. 113
Water Mains, Cement Lined Symposium of Experiences 339
Water Purification, Developments During 1932 1
Water Purification, Papers at 53rd Convention A. W. W. A..... 259
Water Softening, Columbus, O..... 182
Water Softening, Experience with Anthracite Coal as Filter Medium..... 394
Water Softening Plant, Western Springs, Ill. 105
Water Storage Tank, 6,000,000 Gal., Milwaukee, Wis. 237
Water Supply, Developments During 1932 1
Water Supply for Industrial Usage..... 16
Water Supply, Railway..... 9
Water Supply in Relation to City Planning 189
Water Supply, Spartanburg, S. C..... 177
Water Supply for Tanneries..... 138
Water Supply, Pumping, Wilmington, Del. 32
Water Supplies, Long Distance..... 8
Water Treatment, Ammonia in..... 379
Water Treatment, Future of..... 27
Water Treatment, Industrial..... 293
Water Treatment, Railway.....9, 92
Water Treatment, Sludge Removal in.... 95
Water Works Associations in Harness... 271
Water Works, Development in 1932..... 1
Water Works Improvement, Williston, N. D. 395
Water Works Management, Business Side of 308
Water Works Management, Group vs. Municipal 362
Water Works, New, Fort Wayne, Ind... 421
Water Works, Proper Administration of. 299
Water Works School, Rutgers..... 26
Water Works, Selling to Public..... 121
Water Works .....36 Reader
Weather Cycles 219
Wells, Deep, Water Supply from..... 15
Williston, N. Dak., Water Works Improvements 395
With the Manufacturers.....72, 112, 149 .....188, 236, 348, 382

Z

Zeolite Water Treatment, Southern Pacific Ry. 92
Zeolites, Determining Quality of..... 259

AUTHORS INDEX

A

Agar, Charles C..... 99

B

Baker, C. M..... 296
Banta, A. Perry..... 141
Bardwell, R. C..... 9
Baylis, John R.....
.....27, 43, 125, 174, 220, 259, 287, 332
Behrman, A. C..... 55
Bennett, S. M..... 179
Besselievre, Edmund B..... 364
Bloodgood, Don E..... 144
Borriss, M. E..... 275
Bowlus, Fred D..... 141
Brown, Herbert H..... 237

C

Capen, Jr., Chas. H..... 447
Cranch, E. T..... 197
Crist, Marion L..... 299
Curry, Jr., Truman M..... 77

D

Damoose, N. G..... 207
Devilbiss, H. Roland..... 171
Donaldson, Wellington 68
Downes, John R..... 166
Dunwoody, J. S..... 383

E

Eldridge, E. F.....209, 335
Enslow, L. H..... 379
Esty, Roger W..... 323

F

Ferguson, Harry F..... 200
Flentje, Martin E..... 86
Fuller, George W..... 37

G

Gavett, Weston 282
Geupel, Louis A..... 113
Gillette, Halbert P.....101, 109, 218, 344
Goudey, R. F..... 179
Griffin, A. E..... 218
Griffin, Guy E. 426

H

Haseltine, T. R..... 411
Haywood, Jr., R. W..... 349
Hendon, H. H..... 275
Hendon, H. H. 427
Hehnke, Carl 96
Holmes, Glenn D..... 159
Hoover, C. P..... 394
Howard, Norman J..... 1
Hudson, Jr., H. E..... 254
Hurwitz, E. 117

I

Ickes, Harold L..... 354
Irving, Donald F..... 403

J

Jordan, Frank C..... 280

K

Keefer, C. E.....81, 245
Killam, Elson T..... 73

L

Leipeld, Carl 103, 270, 304, 321, 322

M

Marquis, J. K..... 177
Mathews, C. Kelsey..... 395
Maxwell, Donald H.....63, 105
McAmis, J. W..... 102
McCrea, Thomas R..... 225
McNamee, R. L. 421
Mebers, Chas. F..... 265
Miller, Arthur H..... 311
Miller, J. Bryan..... 100
Morse, Robert B..... 192

N

Norcom, Geo. D..... 53

O

Orthmann, Aug. C.....138, 163

P

Pirnie, Malcolm 189
Porzelius, A. F..... 121
Potter, Alexander 367
Powell, Sheppard T..... 211
Priester, Max U..... 453

R

Rudolfs, Willem 69
Ruehl, Edward H..... 306
Rumsey, James R..... 241

S

Schinman, Edward P..... 95
Scott, G. S.....66, 135, 330
Simms, R. B..... 177
Smith, Leavitt R..... 181
Smith, Marsden C..... 157
Speller, F. N..... 380
Sperry, Walter A. 440
Stanley, W. S.....21, 123
Stevenson, Ralph A..... 89
Strowbridge, John 375
Strohmeyer, J. S..... 267

T

Taylor, Wm Gavin..... 283
Townsend, Darwin W..... 317
Turner, Homer G.....66, 135, 246, 330

V

Vermilye, S. 34

W

Walraven, W. B..... 151
West, Fred 137
White, Geo. W..... 327
Wills, W. Compton..... 32
Wilson, P. S..... 6
Wisely, W. Homer..... 200
Wood, Dennistoun 92

Y

Young, George H..... 246

Z

Zack, S. D.....117, 302

127
304
125

271

283

15

421

296

296
251
199
383

383
27
359
113

339

1

259
182

394

105

237
1
16
9

189
177
138

32
8
379
27
293
92
95
271
1

395

308

362
421
299
26
121
ader
219
15

395
149
382

92
259

189
121
367
211
453

69
306
241

95
330
177
181
157
380
440
123
89
375
267

283
317
330

34

151
137
327
32
6
200
92

246

302